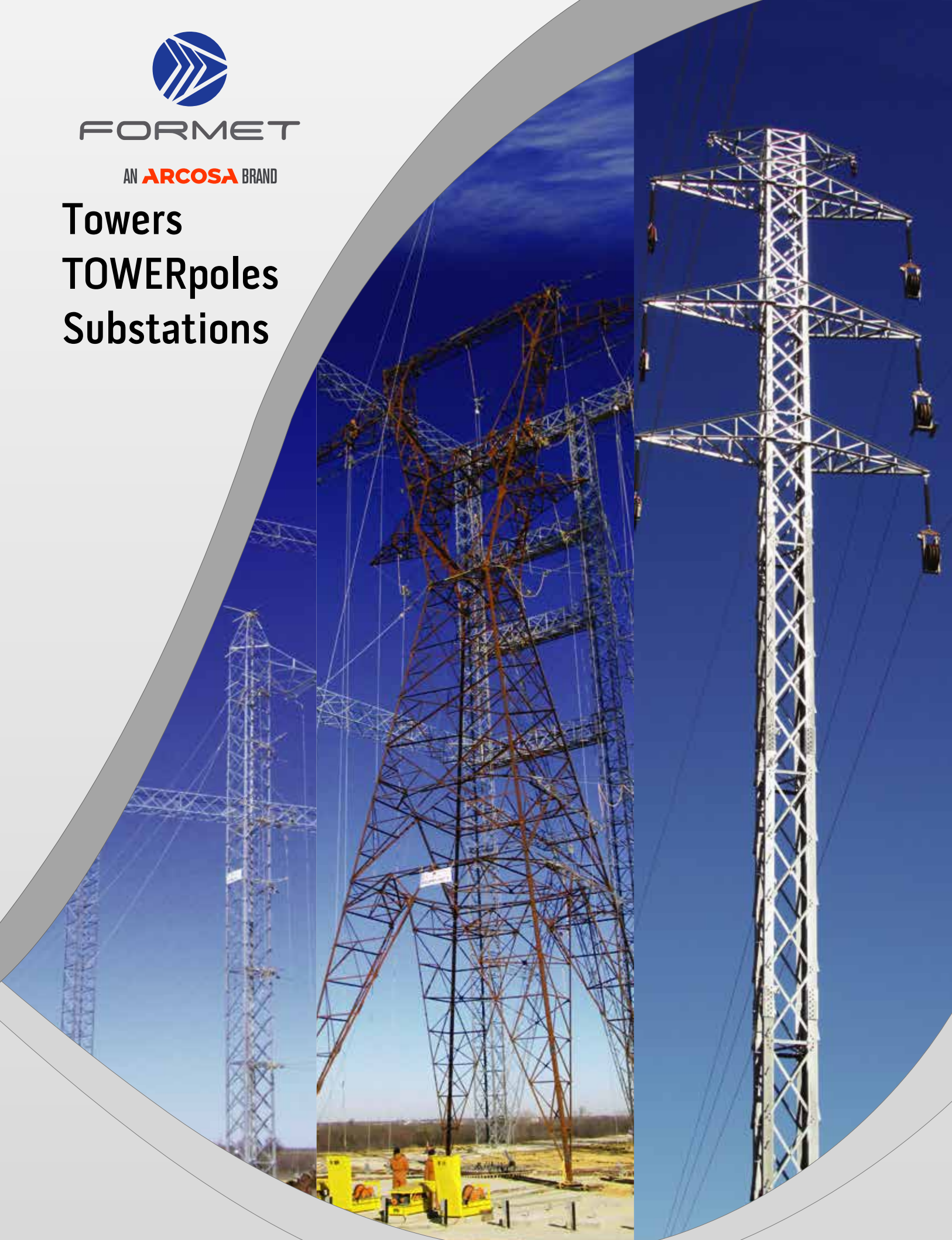




FORMET

AN **ARCOSA** BRAND

Towers
TOWERpoles
Substations



TOWERS FOR Transmission Lines



FORMET's participation in the electrical utility sector has been of great importance; we have taken advantage of over 40 years of experience in the management of hot dipped galvanized steel materials to develop efficient, timely and high quality production processes.

Provided equipment and personnel to fabricate tapered tubular substation structures as an added product line.

OUR PRODUCTION PROCESS IS BASED ON HIGH TECHNOLOGY

FORMET has developed advanced technological resources. Our Engineering and Production departments are linked via our LAN, this enables all manufacturing instructions to be sent digitally, allowing our plant to provide precise communication

between departments, optimize production and ensure accurate manufacture of every component by our CNC angle and plate processing machines.

Before full production of a project, the accuracy and completeness of the details of a design are verified by the trial assembly of a prototype unit, which is thoroughly examined by our quality control personnel to guarantee that the requirements of the client are fully met. The review process is closely followed by our qualified structural engineers to make sure that the assembly and product fully complies with all the fabrication detail drawings and relevant technical norms.

FORMET has a production capacity of 30,000 tons per year for galvanized steel lattice towers. Our fabrication equipment, which includes 13 CNC angle and plate

processing machines, as well as peripheral machines, such as magnetic drills, hydraulic presses, steel forges and milling machines - among others-, is complemented by our galvanizing facilities also with a capacity of 30,000 tons per year.

FORMET's hot-dip galvanizing operation is designed to provide Extra Heavy galvanizing coating to comply with the standards of FORMET's oldest client: Comisión Federal de Electricidad. This galvanizing coating provides longer service life and FORMET offers this "premium" thickness galvanizing to our other North American clients at additional cost.



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1974 A new production department starts operations in Industrias Monterrey (IMSA) for the manufacture of corrugated steel culverts, highway guard rails and the commercial galvanization of steel parts.

1983 Forjas Metálicas (FORMET) is legally incorporated as an independent company.

1984-1986 New production lines are added for the manufacture of road signals and WONDER building.

1995 New production lines are incorporated to manufacture steel lattice towers and substation for energy transmission projects.

2000 Additional CNC equipment is added to increase production capacity of steel lattice towers by 150%.

2001 FORMET commences marketing and sales of transmission line towers for the North American market, providing material for valued clients, including:

- Southern California Edison
- Los Angeles Dept. of Water and Power
- Entergy
- Southern Company
- Puerto Rico Electric Power Authority
- Pacific Gas and Electric Company
- Dominion Resources
- Lower Colorado River Authority
- Tennessee Valley Authority
- Ottertail Power Company
- XCEL Energy

2013 Resources were added and FORMET starts supplying Tapered tubular Substation Structures as a new product line

Since 1995, FORMET has produced over 200,000 tons of galvanized steel material for the domestic and international electrical utility industry.

FORMET is currently certified with ISO-9001:2015 for the design and manufacture of its products.

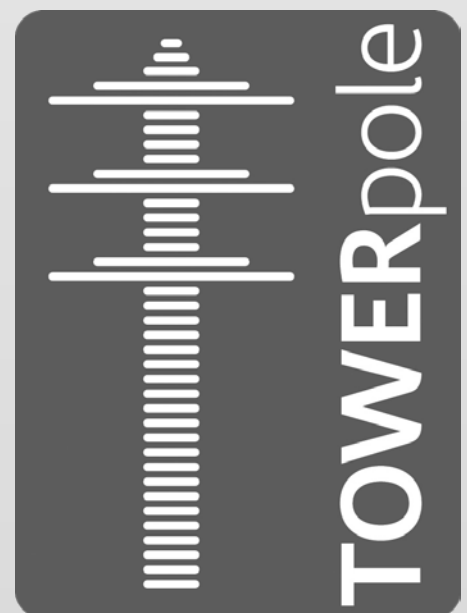


Pole Vise: Wood pole repair system

TECHNOLOGY AND Products

FORMET manufactures the following products with the highest quality standards utilizing our CNC equipment with state of the art technology:

- Transmission line steel lattice towers - 115 kV to 500 kV
- TOWERpoles – a “small footprint” pre-assembled steel lattice tower solution
- Transmission line aluminum lattice towers. – 230 kV to 500 kV
- Pole Vise – a wood pole ground line repair and reinforcement system.
- Tapered Tubular Substation Structures 69kV – 500 kV
- Major Rolled Shape Substation Structures 69kV – 500 kV





As part of FORMET's constant pursuit of innovation, we have developed our TOWERpole structure, a "small footprint" steel lattice tower solution. TOWERpoles have the advantage of being pre-assembled by Mexican personnel and delivered in convenient nominal forty foot sections, resulting in unmatched in-place structure economics, minimum field assembly requirements and shorter construction timeframes.

FORMET has also developed a TOWER pole line restoration system suitable for rapid emergency restoration of line voltages 69 – 500 kV using standard mast sections and structure accessories in variable configurations.

FORMET, is uniquely capable to supply complete aluminum towers or replacement components for existing aluminum tower installations.

FORMET is now capable of providing Design, Detailing and Supply of all types of

Substation Structures, including Tapered Tubular Structures.

FORMET's Pole Vise is a licensed patented wood pole reinforcement system, uniquely suited for ease of installation in rocky or other difficult soil types by use of a jack hammer or backhoe with the appropriate drive head.

- Extend the life of poles with up to 33% groundline deterioration.
- Stabilize damaged poles quickly to maintain line integrity pending final repairs.
- Provide substantial protection to wood poles exposed to traffic damage.

ENGINEERING AND Quality Control

FORMET's engineering department is qualified to design and detail steel and aluminum lattice towers. Our engineers have ample experience using computer

software such as PLS Tower, TOMAD, STAADPro, AUTOCAD, among others. Where full-scale tower testing is required, FORMET makes use of the services of one of the available commercial test facilities located in the U S, Brazil and Spain to conduct the required tests to our clients' requirements.

FORMET's Quality Control Department assures that our products are designed and manufactured in accordance with the appropriate international and national norms, such as NMX, CFE, ASTM, ANSI, ASCE, AWS, IEEE and CSA. We rely on up-to-date, on-site, laboratory equipment and trained personnel to verify the product's quality through each step of the manufacturing process. All appropriate norms and the client's specifications are monitored and documented for compliance with the requirements of our Quality Control Program and ISO-9001:2015 Certification.



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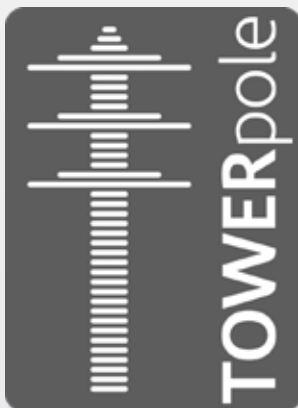
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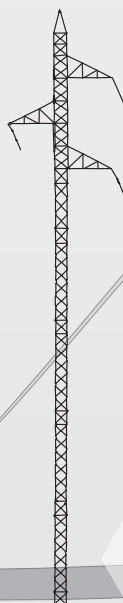
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TOWERpoles are convenient to deliver to the structure sites, can be handled with common construction equipment and the butt splice connections and conductor attachments are readily assembled without special jacks or tools

TOWERpoles are pre-assembled in nominal forty foot sections in MEXICO and shipped by truck or rail to the customer's site. The ability of FORMET to utilize low cost Mexican assembly personnel results in unmatched in-place structure economies



TOWERpoles are available in standard strength sections 2' - 4' square. Customer applications are selected from the standard sections and specified conductor attachments are designed and/or verified using PLS Tower

TOWERpoles FORMET's Alternative to a "Small Footprint"



TOWERpoles are provided with stub angle assemblies or base plate and anchor bolt assemblies for installation in conventional concrete foundations. Foundation requirements are often reduced and the constant cross-section allows multiple height structures to utilize the same foundation assembly

Tower Version 9.20, 9:38 AM
Monday, April 14, 2008
Displaying geometry for load case: 1 1" ICE 4#



As part of the continuing development of FORMET's TOWERPoles, we now offer a "Hybrid" foundation. This straight tubular foundation section can be provided in galvanized or CORTEN with Corr Coat for direct embedment with granular or concrete backfill. The foundation section can be provided in custom lengths to meet your project's soil conditions.



As part of the development of a new 500/230 kV tower family, FORMET has designed and detailed three angle/deadend TOWERpole structures consisting of three masts per structure with angle ranges of 3 - 30, 30 - 60 and 60 - 90 degrees. The 140 foot tall 30 - 60 degree structure, shown, was successfully full scale tested in March 2014. These structures will be supplied to the client in pre-assembled forty foot sections with clustered anchor bolts for foundation embedment.



- 69/115/138 kV TOWERpoles for Short Span Applications of Double Circuit or Single Circuit in Various Configurations including a Universal TOWERpole for Angles, Deadends and Guyed Applications

- 115/138/230 kV TOWERpoles for Medium and Long Span Applications of Double Circuit or Single Circuit in Various Configurations

- 345 kV TOWERpoles for Medium and Long Span Applications of Double Circuit or Single Circuit Configurations

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LATTICE, ROLLED SHAPE & TAPERED TUBULAR SUBSTATION STRUCTURES

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FORMET has supplied lattice and rolled shape substation structures since 1994 in México and 2001 in US.



Welding Station



Brake Press

Seam Welder



Half shelves ready for finish welding

In April 2013 FORMET started fabrication of tapered tubular structures, making us a full service substation structure supplier.



As a standard part of FORMET quality procedures all structures types are prototyped to ensure drawing quality, fabrication quality and ease of assembly.



Prototyping Assy and Shipping of a 138kV Wide Flange A-Frame



FORMET has its own inspection personnel for inspection of all critical welds for its substation projects.

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